

REMARKS

In response to the comments produced in the final Office Action issued on January 15, 2009 by the U.S. Patent and Trademark Office with respect to the present application, Applicant respectfully submits a set of amended claims to replace those on file, along with a Request for Continued Examination (RCE) as well as the following remarks.

All the limitations in each of claims 8, 11, 14, 17, 20 and 23 are incorporated into claim 1. Correspondingly, claims 8, 11, 14, 17, 20 and 23 are cancelled without prejudice. No new matter has been introduced by the amendment.

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claim 1 under 35 U.S.C 103(a) as being unpatentable over Hendel (U.S. Patent No. 5,920,566) in view of McCollom (U.S. Patent Pub. No. 2003/0120769) further in view of Internetworking with TCP/IP Principles, Protocols and Architecture by Douglas E. Comer (hereinafter referred to as Comer). Applicant respectfully submits that the rejection has been overcome at least for the following reasons.

1. One of ordinary skill in the art, at the time of the invention as claimed in amended claim 1 which relates to multicast message forwarding based on layer 3 (IP) addresses, will not resort to Comer which relates to broadcasting based on layer 2 addresses, to add the forwarding multicast message independent of routing forwarding table to the combination of Hendel and McCollom in order to build a system which can send a message to all nodes.

Specifically, the broadcast addresses, multicast addresses and unicast addresses mentioned by Comer all refer to hardware addresses, also called physical addresses, media access (MAC) addresses or layer 2 addresses. In contrast, amended claim 1 recites the limitation “if no multicast message forwarding rule in the forwarding match condition matches the information carried by the multicast message, forwarding the multicast message according to a multicast routing forwarding table”, from which one of ordinary skill in the art can derive that the multicast message forwarding is implemented based on layer 3 addresses, because the multicast routing forwarding table can be created only with respect to layer 3 addresses, rather than layer 2 addresses. As is known in the art, a layer 3 address and a layer 2 address are

substantially different from each other not only in structure and function, but also in message forwarding. For example, forwarding a message based on layer 3 addresses, whether broadcast addresses, multicast addresses or unicast addresses, needs to reply upon looking up a routing forwarding table to determine a forwarding path; while forwarding a message based on layer 2 addresses, whether broadcast addresses, multicast addresses or unicast addresses, does not need to reply upon looking up a routing forwarding table which does not exist with respect to layer 2 addresses.

Therefore, it would not have been obvious to one of ordinary skill in the art at the time of the invention to add the forwarding multicast message based on layer 2 addresses of Comer to the combination of Hendel and McCollom in order to build a system which can send a message to all nodes.

In fact, even in the case of broadcast, i.e. sending a message to all nodes, based on layer 3 addresses, as stated above, the forwarding will still rely upon looking up a routing forwarding table, which is different from that according to the solution as claimed in amended claim 1.

2. The limitation “if no multicast message forwarding rule in the forwarding match condition matches the information carried by the multicast message, forwarding the multicast message according to a multicast routing forwarding table” in amended claim 1 is not taught by the combination of Hendel, McCollom, Comer and Pitcher.

Specifically, the Examiner alleges that Pitcher teaches this limitation because col. 9 lines 51-67 discloses if the multicast group message address is not recognized then forwarding the packet based upon destination list or table. Applicant respectfully notes, however, that Pitcher discloses in col. 9 lines 64-67 that if the group address is not found in the forwarding table, then the multicast packet is forwarded to all ports coupled to multicast routers using the report destination list. Comparing this disclosure with the above-mentioned limitation in amended claim 1, one can find a significant difference in that according to Pitcher’s disclosure, the multicast packet is forwarded by retrieving the group multicast destination list or corresponding Dtag from the forwarding table if the address is found in the forwarding table, and is

forwarded based upon the report destination list if the address is not found in the forwarding table, while according to the solution as claimed in amended claim 1, a multicast message is forwarded according to a multicast message forwarding rule designated by a user independently of a multicast routing forwarding table if the multicast message forwarding rule matches the information carried by the multicast message, even if the address might be contained in the multicast routing forwarding table.

Pitcher, therefore, fails to disclose or suggest the limitation “if no multicast message forwarding rule in the forwarding match condition matches the information carried by the multicast message, forwarding the multicast message according to a multicast routing forwarding table”.

Based on the above, Applicant respectfully submits that amended claim 1 is patentable over Hendel, McCollom, Comer and Pitcher.

Dependent claims 2-7 are also patentable relying at least upon their dependencies from amended claim 1.

For at least these reasons, Applicant therefore respectfully requests the withdrawal of the claim rejections 35 U.S.C 103(a) based on the cited references.

Claims Objections

Claims 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, and 25 are objected to as being dependent from a rejected base claim. Applicant respectfully submits that because claim 1 as amended is now allowable, the objected-to claims are also now allowable. Applicant therefore respectfully requests the withdrawal of the objections to claims 9, 10, 12, 13, 15, 16, 18, 19, 21, 22, 24, and 25.

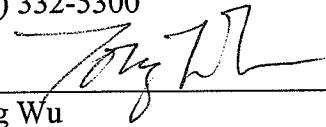
SUMMARY

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,



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